# Michael Saxon

Last update on February 1, 2019

mssaxon@asu.edu • +1 480 296 4216 • saxon.me • www.linkedin.com/in/mssaxon

## Summary

I am a Computer Engineering MS student, experienced with deep learning, speech, DSP, NLP, and affective computing, seeking summer 2019 research interships and 2020 PhD programs in speech processing and ML.

## Skills

*Conceptual* – Computational linguistics, DSP, embedded programming, sensor fusion, FPGA development, deep learning, multimedia processing

*Software* – Python (Pytorch, Numpy, SciPy), C/C++, OpenCV, HTK, Kaldi, Verilog, MATLAB, Linux

*EE Capstone* – Vision and LiDAR Fusion for Autonomous Vehicles (C++, OpenCV)

*Honors Projects* – Forward-Euler Transient Circuit Analyzer, Species Identifier using Transfer Learning

## Selected Coursework (400-Grad)

*ML* – Random Signal Theory; Deep Learning for Media Processing; Information Theory

*DSP, Speech, Linguistics* – Digital Image/Video Processing; Speech Processing, Recognition, and Compression; Real Time DSP; Linguistics; Syntax

*Math* – Cryptography; Applied Computational Methods; Advanced Lin Alg, Numerical Computing; Foundations of Algorithms

## Education

Arizona State University — Tempe, AZ

**MS Computer Engineering, *Grad. cert. in Linguistics*, 4.0/4.0** — *Aug 2018 – **Dec 2019***

Concentration in Multimedia Signal Processing and Deep Learning

**BSE Electrical Engineering, *Mathematics Minor*, 3.6/4.0** — *Aug 2014 – **Aug 2018***

Magna Cum Laude. **Student Orgs:** *Sun Devil Robotics Club* {President 2016 – 2017, Treasurer 2015–2016}, *Data Analytics Club*, **Honor Societies:** *IEEE-Eta Kappa Nu*, *Phi Kappa Phi*

***Barrett, the Honors College*** – Thesis: **Spoken Nasality Detection with Goodness of Pronunciation**

## Experience

Aural Analytics — Tempe, AZ

**Speech Research Engineer** — *December 2018 – present*

Creating ASR-based and DSP-based metrics for neurological health assessment from speech.

Center for Cognitive Ubiquitous Computing — Tempe, AZ

**Graduate Research Assistant** — *December 2018 – present*

Designing and conducting user studies on use of haptic facial action units as a social interaction assistive technology for blind individuals.

**Student Researcher** — *August 2017 – December 2018*

Created novel ASR-based feature for nasality, submitted for ICASSP 2019. Created speech nasality measurement NNs. Designed deep neural networks for multimodal emotion recognition (emphasis on speech), published in HCI International 2018.

The Luminosity Lab, an ASU Strategic Initiative — Tempe, AZ

**AI/ML Working Group Member** — *August 2016 – December 2018*

Designed novel word pair convolutional model for semantic modelling tasks, published in AffCon 2019 workshop at AAAI 2019. Created engaging conversation modelling software for chatbots in a lifelong learning environment.

General Dynamics Mission Systems — Scottsdale, AZ

**Embedded Software Engineering Intern** — *May 2017 – August 2017*

Performed software-level regression testing for the HOOK 3 Combat Survival Radio system. Wrote test scripts and technical reports. Identified software defects tied to issues found and verified correct solutions within a fast-paced Agile dev cycle.

Arizona State University — Tempe, AZ

**Tutor, Engineering Tutoring Center** — *October 2015 – September 2016*

Explaining concepts from math, physics, and engineering classes to facilitate better student performance. Answering questions, giving homework and project help, and hosting review sessions.

**Undergraduate Researcher, Nanoelectronics and Integration Lab** — *June 2014 – December 2016*

Developed software for a fully automated method of rapidly measuring nano-scale deformations in heated computer chip samples based on diffraction patterns created by an incident laser. Created an integrated hardware system for fully automated data collection. Second author in a journal publication.